

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
FACT SHEET
(pursuant to NAC 445A.236)

Permittee Name: Clark County Water Reclamation District
Blue Diamond Wastewater Treatment Facility
5857 East Flamingo Road
Las Vegas, NV 89122

Permit Number: NEV50050

Location: 1.5 miles East of the town of Blue Diamond
Latitude 36° 02' 50" N.
Longitude 115° 23' 0" W.
Township 22S, Range 59E, Section 8 MDB&M
Clark County, Nevada

General:

The Blue Diamond Wastewater Treatment Facility, owned and operated by the Clark County Water Reclamation District (CCWRD), provides sewer service to approximately 117 connections. The facility also receives sanitary wastewater from the nearby James Hardie Gypsum Plant. Flow is received via an 8-inch diameter collection line from Blue Diamond, and via a 4-inch collection line from the gypsum facility. The facility is serviced on a weekly basis. The head works is equipped with a Milltronics® ultrasonic sensor, which measures the combined flow from Blue Diamond and the gypsum plant in the metering flume.

The wastewater treatment facility (WWTF) is located approximately 1.5 miles East of the Blue Diamond townsite. The 0.65-acre primary treatment pond is asphalt lined and aerated. Effluent from the primary treatment pond is discharged to an unlined pond, which has been converted to a wetland treatment cell. Any effluent that is not taken up by the plants or infiltrated through the unlined cell is discharged to a 1.45-acre rapid infiltration basin (RIB). This RIB is generally not utilized, except in periods of low evaporation.

CCWRD has indicated that it is considering closure of the Blue Diamond facility and connection to the main Las Vegas sewer system. Should the facility remain in service, Nevada Division of Environmental Protection (NDEP) will require that modifications be made to the facility so that discharge meets secondary treatment standards (Quarterly averages of 30 mg/l BOD₅ and 90 mg/l Total Suspended Solids). Further, NDEP will require that the current monitor well be reworked or replaced so that the well is completed within the saturated zone of the underlying aquifer.

Flow:

The mean quarterly average and daily maximum influent flow to the WWTF during the term of the current permit are 0.022 and 0.025 MGD, respectively. The highest measured daily flow during the period was 0.031 MGD. The measured influent is well below the permit flow limitation of 0.044 MGD (Quarterly Average).

Effluent Characteristics

Influent to the facility during the period of the previous permit was determined to have mean BOD₅ and TSS concentrations of 198.1 and 150 mg/l, respectively. These levels are typical of levels normally encountered in domestic wastewater treatment systems. The previous permit limited effluent quality by BOD₅ loading parameters. Pond loading limitations are typically applied to pond systems that discharge to groundwater only during periods of low evaporation. Loading was set at 116 pounds BOD₅ per day, based on NDEP facultative pond limits of 50 pounds BOD₅/acre/day discharged to the wetland treatment cell and the RIB. Effluent quality is listed in the following Table:

Parameter	Pond 2 (Wetland Cell)
BOD ₅ Loading, lbs/day (limit: 116 lbs/day)	28.7
BOD ₅ , mg/l (limit: Monitor & Report)	85
TSS, mg/l (limit: Monitor & Report)	95

Receiving Water Characteristics:

Groundwater quality in the area is good, and the water is potable. The closest Blue Diamond Water system wells are approximately 0.6 miles west and upgradient of the WWTF. Static water level measured at the time of well completion was at approximately 44 feet below surface.

There is one monitor well associated with this permit. When originally installed, the monitor well yielded water at approximately 25 feet below ground surface. During the term of the current permit, the well has been dry at each sampling episode. The schedule of compliance will require installation of a new well or deepening of the existing well to better assess any impact to the groundwater below the site.

Proposed Determination:

The Division has made the tentative determination to renew the proposed groundwater discharge permit for a period of five (5) years with specific requirements for achieving effluent compliance and protection of State groundwater resources.

Proposed Effluent Limitations and Special Conditions:

Discharges from the Blue Diamond WWTF to groundwater of the State will be limited and monitored as follows:

PARAMETER		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Quarterly Average	Daily Maximum	Measurement Frequency	Sample Type
Flow (MGD)		0.044	---	Continuous	Flow Meter
Primary Pond	Influent: BOD5 (pounds/day) BOD5 (mg/l) TSS (mg/l)	32.5 ¹ Monitor and Report Monitor and Report		Quarterly	Discrete
	Effluent: BOD5 (mg/l) TSS (mg/l)	40 90	60 ---	Quarterly, as Discharge Occurs	Discrete
	Pond Level (feet)	Monitor and Report		Quarterly	Discrete
RIB	Pond Level (feet)	Monitor and Report		Quarterly	Discrete

¹ Based on 50 lbs/acre/day discharged to a 0.65 acre primary pond.

Schedule of Compliance:

- The Permittee shall implement and comply with the provisions of the Schedule of Compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the Schedule of Compliance.
- A revised Operations and Maintenance Manual (O&M) shall be submitted for review and approval by **MMM DD, 2005**.
- Within ninety (90) days of the permit issuance, the Permittee shall submit a schedule for draining, removing sludge, inspecting and sealing (where necessary) of the primary and secondary asphalt-lined ponds.

Rationale for Permit Requirements:

The Division's rationale for the proposed monitoring conditions is as follows:

- Flow:** Flow is tracked to ensure that the design capacity of the treatment pond is not exceeded, and that the proper monitoring regimen is followed when the facility nears design capacity.
- CBOD₅:** The Division requires the monitoring of effluent Carbonaceous Biochemical Oxygen Demand (CBOD₅ or Inhibited BOD) as an indicator of treatment performance in the pond. The limitations are set under special conditions of post-primary treatment. The renewed permit requires sampling on a quarterly basis. The renewed permit requires sampling on a quarterly basis.

TSS: The TSS limit is set at 90 mg/L, at the standard expected for multi-pond wastewater treatment systems. Other similarly operated systems within the State meet the 90-mg/l standard.

Procedures for Public Comment:

The Notice of the Division's intent to renew a permit authorizing the facility to discharge secondary-treated effluent into groundwaters of the State, subject to the conditions contained within the permit is being sent to the **Las Vegas Review Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. All written comments are to be hand-delivered, postmarked (via mail) or transmitted to the Division via fax or e-mail **by 5:00 P.M. on September 26, 2005.**

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

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Bureau of Water Pollution Control
July 2005